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ABSTRACT

This series of discussion papers presents the respective positions of the North Carolina State Board of Community Colleges (NCSBCC), the North Carolina State Board of Education (NCSBE), and the University of North Carolina Board of Governors (UNCBG) regarding several educational issues facing the state. The first set of papers focuses on accountability and flexibility. The NCSBBC stresses the joint responsibility of all three boards for ensuring the common goals of literacy, transferability, and the wise use of resources. The NCSBE's paper supports increased flexibility for local school systems, the Department of Public Instruction, and itself; addresses the "governance problem" in public education; and advocates national educational goals and expectations. The UNCBG focuses on the resources necessary for the support of public education and the measures needed to insure an effective and productive use of these resources. The second group of papers deals with economic development and work force preparation. The NCSBCC discusses responses to the changing marketplace, areas of mutual concern and cooperation, and strategies to field a competently trained work force. The NCSBE presents its goal of insuring that all high school graduates possess the necessary academic foundation and work and study habits to enter the work force. The UNCBG addresses the university's contributions to economic development in terms of instruction, research, and public service programs. The final set of papers deals with issues related to the transferability of education, skills, and training. The NCSBCC's discussion focuses on community colleges' articulation with high schools and universities, transfer programs, and the "tech prep" initiative. The NCSBE's concerns relate to the need of large numbers of high school graduates for remedial education at the college level, the need for adequate guidance, and dual enrollment programs. The UNCBG underscores the importance of maintaining minimum admissions requirements while increasing student flow to the university. (WBT)

ED316285

DISCUSSION PAPERS

Second Meeting of the

North Carolina Education Governing Boards
March 8, 1990

Accountability/Flexibility

Economic Development and Work Force Preparation

Transferability

State Board of Community Colleges
State Board of Education
University of North Carolina Board of Governors

JC 900146

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NORTH CAROLINA STATE BOARD OF COMMUNITY COLLEGES
ACCOUNTABILITY/FLEXIBILITY

North Carolina's educational systems (public schools, community colleges and universities) are jointly responsible for an essential state function: preparing citizens for full participation in life--private, public and economic. While the specifics of this goal can and perhaps should be debated, it is generally accepted. This joint board meeting results from legislative intent that the leaders of the systems shall be not only jointly responsible but also jointly accountable for the goal. The public and the legislature expect each of the systems which delivers education to bear its share of responsibility for meeting this goal; they also expect those who lead the systems not to lose sight of the joint responsibility in their attempts to fulfill their separate responsibilities. They perceive that problems such as illiteracy, high dropout rates and the need for a trained work force involve all the systems; they are impatient when the phenonmenon that "everybody's business is nobody's business" comes into play.

The fact that the public (and legislature) demand that education be accountable reflects the perception that the delivery of education has become less effective in spite of escalating costs. This coincides with a period when pressures on public funds have increased. It also coincides with new recognition that the educational sectors cannot in fact be effective in isolation from each other, but are interdependent in essential ways. For example, community colleges and universities depend on the public schools to provide students with basic skills; public schools and community colleges depend on universities to accept those of their graduates who are prepared to enter, to provide trained faculty and staff, and to conduct basic research on the full gamut of educational content and management problems; public schools and universities depend on community colleges to extend educational opportunities to those who are not able for a host of reasons to participate in education in other settings; public schools depend on community colleges to supplement and enrich educational opportunities for their students and to receive their graduates; universities also look to community colleges for a supply of students. Employers depend on all the sectors to provide needed skills to employees at every level of their operations.

In fact, the public expects educators from each of the sectors to maximize their effectiveness and efficiency through cooperation. And the public expects education to be accountable not only as separate sectors for their areas of primary responsibility, but also as a whole for meeting the overall goal of education.

The Boards' Responsibility to be Jointly Accountable

To be accountable is to be answerable, implying willingness and ability to justify results. The corresponding implication is that the accountable entity also has the authority to make choices among actions and to implement approaches that will achieve results. The responsibilities of policy makers are to grant appropriate authority to set appropriate expectations for results, and to assure the accountability of those to whom authority is granted.

North Carolina's legislative policy makers have taken seriously the contention that additional strict controls on the use of funds may not achieve the results that are desired. Thus, they have adopted legislation that is intended to provide more flexibility to educators--flexibility that is conditioned on achieving and documenting results. Both Senate Bill 2 and Senate Bill 44 give educational systems leeway to set goals and to determine appropriate measures of success in meeting those goals. State-level policy makers--these boards meeting in joint session today--have been granted authority with accountability. Their response must be to choose appropriate goals and priorities and to adopt policies which grant appropriate accountability and authority to local levels. The State Board of Community Colleges also invites the State Board of Education and The Board of Governors to engage in an ongoing dialog about the common goals of the educational community in North Carolina, and ways to fulfill our joint responsibility to be accountable to the public.

Common Goals and Common Accountability

Each component of the educational system in North Carolina has its own goals but there are goals which all have in common in areas such as literacy, transferability, and wise use of resources. Similarly, while there are accountability policies which each board can and should set individually, there are also joint policies which will encourage cooperation among the systems and increase the ability of the educational community as a whole to be accountable for results.

Each system's goals include providing for high quality in the delivery of the education and training programs within its mission. Each strives to insure equitable access, again within its mission, and to support the social and economic progress of the state. Accountability systems are being established to document that these goals are being met. Each board should also have as a goal the development of strong partnerships with the other providers of education. This is a recommendation of the Commission on the Future of the North Carolina Community College System and is a goal of the State Board of Community Colleges.

The State Board of Community Colleges has adopted a system-level plan which includes goals addressing the common concerns of educators. Its developing accountability system will focus on documenting the delivery of high-quality programs, providing equitable access, addressing the state's economic development goals, working with public schools and four-year institutions, providing community services and ensuring good management.

Ultimately, community colleges are accountable for serving students with the most appropriate programs and services and seeing that they make as much progress as possible toward their individual educational goals. To determine how to provide the programs and services, community colleges need the cooperation of public schools to identify students' special needs and to insure smooth educational and social transitions. To insure that students can continue to progress after they leave community colleges, and to determine how well their experiences in community colleges have prepared them

for later experiences, community colleges need the cooperation of the universities.

In specific terms, the State Board of Community Colleges requests the State Board of Education and the University of North Carolina Board of Governors to adopt policies which will result in increased cooperation in establishing accountability measures. Such policies would support the following:

* Establishment of common definitions of terms used in assessment and student tracking;
* Identification and assistance in locating students who have dropped out of high school and need alternative programs;
* Identification of educational records of entering students;
* Identification of special needs of entering students;
* Identification of skills expected of students entering four-year institutions at various points in their academic careers;
* Identification of credits granted and denied by four-year institutions;
* and
* Identification of successes and problems of former community college students at four-year institutions, with comparative data.

Resources and Accountability

Without sufficient resources, no structure can have the results intended, and accountability is meaningless. The capacity to "do more with less" is limited. Over time, the ability of educational leaders to do the job has been eroded by too few dollars; the negative effect has been worsened by restrictions on the uses of educational dollars. The result has been poor educational outcomes and growing bureaucracy oriented to compliance, not accountability. Each board has a stake in insuring that the resources and authority granted to all educators enable them to accept responsibility and be accountable for the results intended.

Government should provide sufficient resources to deliver excellent programs and to administer them well. Inevitably, the documentation of effectiveness which accountability requires also has a cost. The systems which must be put into place to collect, analyze and share data are not created without an investment of time and equipment. However, given today's technology, accountability systems are feasible and can be expected to enhance quality and efficiency.

Accountability for results is essential...and so are the flexibility, authority and resources to make accomplishment of the goal possible. The educational systems are responsible for making "the right to the privilege of education" possible for North Carolina's citizens.

NORTH CAROLINA STATE BOARD OF EDUCATION
ACCOUNTABILITY/FLEXIBILITY

The concept of accountability/flexibility has become a popular one in education circles during the past few years. The concept has relevance to public education and the State Board of Education as it affects both the local school system level and the Board/Department level. This paper will discuss accountability/flexibility as it relates to both levels of education.

The North Carolina State Board of Education is on record supporting increased flexibility for local school systems. The Board believes that efficiency and effectiveness can be improved in local school systems if those systems are allowed to operate with minimal state regulations and mandates. While the Board will always play a role in terms of general supervision and oversight regarding the North Carolina public schools, there is agreement that local school systems now need the opportunity to demonstrate progress that can be made through reduced state mandates.

During the 1989 session of the North Carolina General Assembly, a landmark piece of flexibility/accountability legislation, commonly known as Senate Bill 2, was passed. This legislation, which will be implemented during the 1990-91 school year, provides an opportunity for local school systems to receive minimal state regulation and also requires local school systems to take a hard look at student performance; more specifically the legislation requires that local performance goals be established and publicized. In addition, the bill provides that the increased flexibility will be removed unless these local student performance goals are met. As of this time, all school systems in North Carolina have indicated that they will participate in Senate Bill 2.

In addition to providing guidelines and oversight for the implementation of Senate Bill 2, the State Board of Education staff is currently beginning the process of reviewing all Board policies and will, therefore, be in an excellent position to review and reconsider any policies

which might need to be changed to allow appropriate flexibility for local school systems. Further, the Department of Public Instruction will be bringing to the State Board of Education periodic recommendations for state laws and policies which might need to be modified in order to provide flexibility for local school systems. If the Board agrees that these laws need changing, then the Board can include such recommendations in its legislative request to the General Assembly.

The State Board of Education also is interested in the concept of flexibility as it relates to the operation of both the Board and the Department of Public Instruction. More specifically, the Board has expressed concern over the past several years regarding the fact that the General Assembly has increasingly begun to regulate public schools and to legislate in areas where the Board and the Department were previously given autonomy and authority. The Board and the Department are anxious to assume the primary policy-making and administrative roles for public education in North Carolina. The many laws which have recently been passed by the General Assembly not only diminish the Board's decision-making authority, but in addition create numerous assignments for the Board including monitoring, reporting, and oversight of legislatively initiated programs; thus, the Board is required to spend considerable time on these activities and is therefore taken away from its prime policy making role. Further, the many budget related rules and regulations, which are generated by the General Assembly and the State Budget Office, tend to constrain the Board from creatively using State funds to attack critical problems facing public education; thus, even if the Board recognizes that there are ways to use funds more effectively, it may be prohibited from making such changes unless it approaches the General Assembly, directly, for permission.

Another critical issue related to accountability and flexibility is what has commonly been called "the Governance problem" in public education. Currently, the State Board of Education is legally required to make policies affecting the North Carolina public schools, and the Superintendent is

is required to carry out those policies. However, North Carolina's unique educational governance structure establishes a Board appointed by the Governor and a State Superintendent elected by the people; therefore, the Superintendent, who is to carry out the policies of the Board, has no direct accountability to the Board. The State Board of Education would prefer to have the flexibility, which is provided in approximately 35 other states, which allows the Board to appoint the State Superintendent, and thus have direct control over the administration of its policies. Thus, this governance flexibility is a primary goal of the State Board of Education and would, in all likelihood, allow the Board to be more accountable to the public in administering and supervising the North Carolina public schools.

A final issue regarding accountability is the establishment of national goals and expectations for our public education system. A number of recent events have placed the spotlight on this issue. For example, the National Alliance of Business is currently working with the Educational Testing Service to develop a national test measuring what skills students have mastered in high school. This test is being developed because of the perceived lack of credibility of the high school diploma. In addition, national public opinion polls show increased demands for a national set of student performance goals. And, the President's summit conference on education also established national education goals as a major need for this country.

Because of these indicators of the desire for a more common, national set of educational goals, it is important that the three boards responsible for education in North Carolina have a clear and mutually acceptable set of expectations for education which will ultimately lead to high performance on any set of national goals.

UNIVERSITY OF NORTH CAROLINA BOARD OF GOVERNORS
ACCOUNTABILITY/FLEXIBILITY

The terms "accountability" and "flexibility" in the context being discussed by the three boards are complementary, not contradictory. They both pertain directly to a basic question of public policy and to the responsibilities of the boards: What resources are needed for the support of public education and what measures are needed to insure an effective and productive use of the resources?

There are at least two major forces at work in the public life of the State that make it necessary for the three boards to explore these complementary principles of accountability and flexibility. One is the claim upon State resources that is already made by public education (and thus by the three boards), particularly in a time of fiscal uncertainty. The pressures created by this and other claims naturally lead to pressures upon the educational systems to "account." The second force is the increasing acceptance by governmental, business and other leaders of the proposition that effective systems of public education are indispensable if the quality of life is to be improved and economic advance is to be achieved. The call to "account," in other words, is in effect an acknowledgement that education is a vital force -- the vital force -- in the life of the State and of the nation. For each of the three boards and the institutions they lead and govern, the principle at work is an old and simple one: the responsibility of stewardship.

This stewardship of the Board of Governors, and of each of the boards, extends into many areas of the life of the State. The University and its institutions have broad service and research responsibilities as well as instructional ones. Through the Area Health Education Centers and the teaching hospitals, the agricultural extension and research services, public television, artistic performances, continuing education programs, and a vast enterprise of basic and applied research, the life of the State is directly affected every day by the activities of University faculty, staff and

students. While all these are important, it is upon the basic instructional function of the University -- and especially in the education of undergraduate students -- that particular interest and concern are directed in most of the current discussions of accountability and flexibility. Moreover, it is in this instructional area that the University, the community colleges and the schools share a common calling and have a special need for mutual support and cooperation.

The State necessarily looks to the University to prepare its teachers, accountants, engineers, scientists, physicians and other professionals, and to help prepare students as well for the responsibilities of citizenship. Here are the immediate and vital linkages among the schools, the community colleges, and the University.

For the University's institutions, accountability in this sphere can be largely defined around the response to three questions:

(1) What should students learn and what qualities should they develop during the undergraduate experience?
(2) What are the students actually learning and what qualities are they developing?
(3) What can be done in undergraduate education to bring improvements in both respects?

Finding more informative and better ways to get directly at the answers to these questions is receiving more attention from colleges and universities now than at any time in the past. Such efforts have come generally to be called "assessment" programs. This is the response, in effect, to the call for more "accountability." Note that it is not simply an accounting of how money is spent. It goes beyond that to ask about the outcomes -- the results -- of the educational experience.

Assessing outcomes is not new. Every professor would say that through final examinations there is already a thorough assessment of student learning, and this is true. Moreover, the University has long had many activities and programs that are measures of the effectiveness of the educational programs -- e.g., surveys of graduates, monitoring of licensing examination results, and the accreditation process itself. But the emphasis on deliberate, comprehensive, institutional measures of effectiveness is new, it is reflected in changes in accreditation standards themselves, and it promises to improve our accountability. One way it increases the awareness of accountability is that it requires, if it is to be properly done, a stronger set of relationships and more comprehensive exchanges of information among the University, the schools and the community colleges. An institution cannot adequately determine, for example, what its students have learned without first having a good grasp of what they knew when they entered the institution, so assessment is leading here to the design of new systems of reporting between University institutions and the public schools. At the other end, an adequate determination of the effectiveness of teacher education graduates similarly requires new relationships and new information exchanges with the schools. In each instance the assessment should produce an exchange of information that will help the schools better prepare students for the college experience and help the University send to the schools graduates of improved teacher education programs. Performance reports on transfer students in the University have for some time been prepared for the community colleges, and these similarly can contribute to program evaluation and improvements.

A good and recent example of significant educational assessment, and of cooperation among the boards, is the University's studies of its remedial education programs. Examination of these programs over a period of time was a significant factor in leading to the adoption by the Board of Governors of the new minimum admissions requirements, and this action has in turn helped to stimulate new cooperative activities with the schools and with the community colleges and the development of new reporting systems among them that will contribute to program improvements.

This same experience is illustrative of some important connections between being accountable and having the flexibility to take timely action. The boards must have authority to act as the Board of Governors did in setting minimum requirements. The Board of Governors and the Board of Education must have authority to design and put into effect the reporting systems needed to enable both the high schools and the universities to determine the adequacy of student preparation. With this kind of ability to act, and the extent of flexibility this represents, both boards can improve their accountability. Flexibility, like accountability, has meaning in matters other than spending money.

This connection of flexibility with accountability is implicitly recognized in actions of the General Assembly and of the regional accrediting body in their calls for assessment. Legislation calling for this new accountability requires the Board of Governors to adopt assessment plans for each constituent institution, but it does not require a single uniform plan for all. The assessment can be tailored to particular institutional responsibilities and programs, and the accreditation standards afford this same flexibility. This flexibility is necessary also because of the complexity of the task itself. Trial and error will certainly be an element in the search for better measures of effectiveness.

There is, however, one common element in the efforts for improved accountability that each of the three boards must contribute to developing. This is a better understanding of student movement among all three sectors and of the structure of the curriculum in each. Technology makes possible comprehensive collection and analysis of data to help the schools, the community colleges and the universities in this essential task. Cooperation in designing these systems and in putting them in place is essential if better understanding is to be achieved, and that understanding can in turn help each board to be more accountable for the effectiveness of the educational programs for which it is responsible. Further, in accounting for their use of current resources, the boards can more accurately convey to policy-makers the needs for additional resources for further improvements in educational outcomes.

NORTH CAROLINA STATE BOARD OF COMMUNITY COLLEGES
ECONOMIC DEVELOPMENT AND
WORK FORCE PREPARATION

In many respects the educational climate of North Carolina in the 1990's is not dissimilar to the climate which existed in this state one hundred years ago. By the late 1880's, the state was trying to catch up with the technological advancements of the Industrial Revolution. The need for postsecondary educational facilities structured to support the manufacturing industries' need for graduates trained in the fields of science and technology led to the founding of many of our land-grant colleges.

In 1990, the needs are similar, yet different. Providing the business community with a competently trained work force remains the major responsibility of the public schools, the university system, and the community colleges. Yet the primary educational "need" of the 1990's is not the creation of more schools, colleges, and universities, but rather a need to refocus and redefine the nature of the mission, structure, and means by which the three primary education systems deliver their services.

Changing to meet the needs of the changing marketplace

Since 1985, North Carolina industrial investments in new equipment and facilities have averaged more than five billion dollars a year, reflecting the need to be competitive in the global economy. New technology has forced employers to redefine what they can afford to accept as basic or minimally skilled employees. Today, three of every four jobs in this country require some educational or technical training beyond the high school level. And, as the business community's demands for higher levels of education and training increase, North Carolina's ability to produce sufficient numbers with sufficient skills for the work force has declined.

North Carolina has averaged the creation of 95,000 new jobs annually since 1985, and conservative estimates project 760,000 new jobs by the year 2000. With a projected pool of only 550,000 new workers, the state

faces a worker shortfall in excess of 210,000. Clearly the needs of the workplace have and will far outpace our present ability to produce workers trained to fill these jobs. Even if North Carolina employers start importing workers in order to fill job shortages, there is no guarantee that these new workers will possess the skills or education to do the jobs they are brought here to do.

To counter this trend, North Carolina must vigorously pursue a course of education, training and, more specifically, public awareness of the numbers, types, and economic rewards associated with careers in these areas of worker shortfall. At the start of the last decade, the state adopted a highly aggressive recruitment policy for high-tech industries. So successful was this strategy, the State Board of Community Colleges believes the general public now considers employment in high-tech occupations as the only means of measuring professional success. The educational community must convince the general public that our state's economic development and stability depend on the strength of all segments of its economy, and that there is as much dignity in working with your hands as there is in heading a major conglomerate.

Furthermore, to accomplish the goal of increasing the numbers in the available worker pool, the State Board of Community Colleges endorses the concept of education as a progression of lifelong learning experiences, continual and non-ceasing from the moment our children enter the classroom for the first time and continuing throughout their working lives, as opposed to the compartmentalized educational structure in place now. And while recognizing each system has specific missions to fulfill, the State Board of Community Colleges also believes that there are equal opportunities, in both the long- and short-term, to demonstrate system interdependence and to increase accessibility.

Areas of mutual concern and cooperation

The North Carolina Community College System is mandated by law to provide technical and vocational education and skills training for the state's adults. It is dependent on the secondary system for the bulk of its students. The need for education and training beyond high school is well documented and, yet, 57 out of 200 students sitting in ninth grade classes today will enter the job market with no education, training or skills beyond those they acquire at the secondary level.

One already successful method of increasing the number of college-bound youths to community colleges and the university system is the tech prep model developed in Richmond County and already duplicated between a number of public school systems and individual community colleges across the state. Preliminary studies in Richmond County have shown a rise in SAT scores, a lower dropout rate, a sixty percent rise in students enrolled in high school algebra, and a twenty-eight percent increase in the number of students transferring to postsecondary educational institutions. Equally successful has been the 2+2+2 model operated by the Charlotte/Mecklenburg School System, UNC-Charlotte, and Central Piedmont Community College

The State Board of Community Colleges proposes that all three boards adopt policies to implement Tech Prep, 3+2, 2+2+2, and others to encourage development and implementation of these policies.

The State Board of Community Colleges also recommends that the three boards adopt policies which encourage local colleges, universities and secondary schools to increase the number of high school graduates enrolling in postsecondary education by providing local institutions with financial incentives, where possible, in order to encourage aggressive and innovative methods of accomplishing this goal.

Furthermore, the State Board of Community Colleges strongly recommends that all three systems explore means of providing adequate information and counseling to secondary students in order for these students to make informed career and educational decisions.

The State Board of Community Colleges reaffirms its support of the State Board of Education's efforts to reduce the state's dropout rate and increase its national academic standing. The state board believes it is in the best interest of the student and the state to make every effort to keep students in the classrooms until they graduate.

The State Board of Community Colleges seeks the support of the Board of Governors and the State Board of Education in its efforts to reduce the number of this state's working population who lack a high school diploma. As the nation's tenth most populous state, North Carolina also has the nation's third highest illiteracy rate. More than 1.7 million adults over the age of eighteen lack a high school diploma. The State Board believes that the system cannot accomplish its primary mission of providing advanced occupational skills in a climate where so many employees, or potential employees, lack basic literacy skills. Therefore, the State Board of Community Colleges requests that a joint task force be established composed of members from the three public boards, appropriate field representatives from the schools and colleges, and members of the business community, and that this task force be charged with examining and sharing methods, resources, and expertise, with a goal of increasing the percentage of the work force who are high school graduates (currently 67.8 percent, age 25 and older) by fifty percent by the year 2000.

Conclusion

In reporting its findings to the state board in 1989, the Commission on the Future of the North Carolina Community College System listed three strategies the system and the state must pursue in order to field a competently trained work force:

1. Lower the state's dropout rate, educate through the high school level those who have already dropped out, and enroll more high school graduates in advanced technical and vocational training;

2. Adopt minimal basic "work force" skills every worker should possess to be able to change and adapt with the marketplace; and

3. Adopt and maintain world-class standards of excellence for all technical programs and see that all graduates achieve and keep those high levels of excellence throughout their careers.

The State Board of Community Colleges affirms its belief that the ambitious goals outlined by the Commission on the Future are eminently achievable. But to reach these goals, the community college system must have the support of the public schools, which must provide the colleges with adequate numbers of educated and motivated students. It must also have the support of the university system, which provides the majority of our system's faculty training, and much of the data and research on which our system and the business community depend. But most importantly, all three systems must have the financial means of accomplishing their tasks. The state board believes that a renewal of the state's commitment to funding all three public education systems at realistic levels is needed. Last year, this state made a substantial and long-term commitment to more and better roads in North Carolina. The State Board of Community Colleges believes that education is as important to this state's economic development as asphalt, and a more significant long-term investment.

NORTH CAROLINA STATE BOARD OF EDUCATION

ECONOMIC DEVELOPMENT AND WORK FORCE PREPARATION

"In 1987, New York Telephone Company tested 21,000 applicants in basic reading and reasoning skills for entry level positions. Fewer than 3,700 passed."

Fortune Magazine, 1988

It is very likely that most students in the public schools will eventually become part of the work force; thus, all of public education is, in one sense or another, a preparation for this activity. The State Board of Education has heard from numerous business leaders over the past few years who have said that the high school graduates who come to their places of employment are not adequately prepared to deal with the demands of the work place. One major employer in the State has stated that forty percent of those students who apply for positions are unable to accurately complete the employment form. Because of these concerns, the State Board of Education is increasingly committed to ensuring that all high school graduates are competent to enter the work force.

The more specific comment that is often heard increasingly from businesses is that students who come to them do not possess the basic academic skills to provide a strong foundation for the particular type of employment. In other words, what businesses are increasingly saying is that vocational training is helpful, and beneficial for students, but that a more paramount concern is ensuring that the students first have the basic academic skills. The rationale for these sorts of comments seems to be that if a student has competence in the basic academic skills, then it is highly likely

that the student can be readily trained for whatever specific vocational skill is required for a particular job: it is the view of many businesses that vocational training can be done on the job site much more easily and more economically than the basic academic training.

In addition, the businesses typically have unique and specific training which would be required for students no matter what vocational training had been provided in high school. Thus, the State Board of Education is voicing increased concern about basic academic foundation skills, and will consider policies in the future related to high school graduation, required courses, academic standards, and related matters.

Another matter related to work force preparation is ensuring that there are adequate jobs and adequate businesses at which students can work. And, while creation of jobs is certainly not a basic responsibility of the State Board of Education, there are aspects of the Board's role which can directly affect the creation of jobs in North Carolina. For example, it has recently been reported that North Carolina's Scholastic Aptitude Test (SAT) scores are the lowest in the country. It is likely that future industrial recruitment could be hampered because of the state's educational reputation, whether the reputation is accurate or not. Therefore, improved educational quality resulting from State Board of Education policies can, indeed, have some indirect affect on recruitment of new business and industry and, therefore, work opportunities for students.

Another issue related to work force preparation is the kinds of skills that transfer from school to business. One of the comments that is heard from business leaders is that students come to the world of work with less than adequate work habits. According to a recent report by the Association for Training and Development and the U. S. Department of Labor, employers do have needs beyond basic academic skills:

"Employers want employees who can learn the particular skills of an available job--who have learned how to learn.

Employers want employees who will hear the key points that make up a customer's concerns (listening) and who can convey an adequate response (oral communication).

Employers want employees who can think on their feet (problem-solving) and who can come up with innovative solutions when needed (creative thinking).

Employers want employees who have pride in themselves and their potential to be successful (self-esteem); who know how to get things done (goal setting/motivation); and who have some sense of the skills needed to perform well in the workplace (personal and career development).

Employers want employees who can get along with customers, suppliers or co-workers (interpersonal and negotiation skills); who can work with others to achieve a goal (teamwork); who have some sense of where the organization is headed and what they must do to make a contribution (organizational effectiveness); and who can assume responsibility and motivate co-workers when necessary (leadership)."

There is evidence that good study skills and other skills learned in the public schools transfer to business; thus, it is not just academics that are related to the world of work. Therefore, it is the role of the

State Board of Education to create the kinds of policies which establish an orderly and effective school environment which promotes good work and study habits during the school experience. It is likely that these habits will transfer to the business world.

An additional aspect of work force preparation is the realization that the future workforce is truly international and that we are operating in a global economy. The Board is certainly aware of this reality and is making attempts to ensure that students are prepared for this environment. For example, through the Basic Education Program and other efforts of the Board, students are taking increased numbers of courses in foreign languages and are taking these courses earlier in the school experience. It is the intention of the Board to continue to be alert to opportunities which might better prepare our young people to function in an international world of work.

A final issue related to work force preparation is the linkage between school and work. Students tend to make decisions based on the kinds of results to which various actions lead. For example, if students know that they can make low grades and still get a reasonably good job, then they may very well have minimal concern about making good grades. Further, if students realize that there is no difference in salary for students who make good grades and students who make poor grades, then students will be minimally concerned about making good grades. On the other hand, if we could create an environment in which students knew, early, that good grades made a real difference in either getting a job or in getting a higher salary, then we should logically see a significant improvement in student performance.

The Board is very aware that students are smart enough to figure out these kinds of relationships; thus, as long as we tell students it is important that they make good grades, but allow them to continue to be successful in obtaining jobs without making good grades, then students will tend not to believe what we say. The Board is well aware of this situation and will be working to identify opportunities to create stronger linkages between school and work which reward students who do well in school.

UNIVERSITY OF NORTH CAROLINA BOARD OF GOVERNORS
ECONOMIC DEVELOPMENT AND
WORK FORCE PREPARATION

North Carolina's economy is changing rapidly. New research-based industries are being established. Older traditional industries are being transformed by the application of advanced scientific or technological concepts. Competition is increasingly global.

In such an economy, the most important source of productivity is human capital. Work force development is critical. Economic growth is dependent upon the availability of a well-educated, skilled work force able to compete successfully in a worldwide market.

The institutions of The University of North Carolina, through their instruction, research, and public service programs, contribute significantly to economic development and preparation of a work force.

The undergraduate, graduate, and professional degree programs of The University provide a vital supply of highly skilled graduates for the professions and for all sectors of our economy. In 1988, University institutions had 17,573 graduates of their baccalaureate programs and 6,108 graduates of their graduate and professional programs. Most of these graduates are employed today in North Carolina.

A survey of those baccalaureate graduates one year after graduation revealed that seventy-four percent of the employed graduates were working in North Carolina and twenty-six percent were working outside the state. It is interesting to note that more than four-fifths (82%) of the employed graduates who were classified as in-state students found work in North Carolina and more than one-fourth (28%) of the out-of-state students remained in North Carolina to work.

Moreover, when graduates working outside the State were asked if they had looked for a job in North Carolina, almost half of them (46%) responded yes, and over two-thirds of them (68%) reported that they wished to return to North Carolina. These numbers show that University graduates have a clear desire to stay in North Carolina to work and live, even if they are from another state.

Given the changing demands of the workplace, the need for a higher level of educational attainment for members of the work force, and the declining numbers of young adults entering the labor market, continued access to affordable education for upgrading and retraining is essential to create and maintain a workforce with the requisite skills for today's economy.

The University's institutions are already engaged in extensive continuing education efforts. The professional schools (e.g., business, education, engineering, medicine, dentistry, nursing, social work, and textiles), the Area Health Education Centers, the Agricultural Extension Service, and the Industrial Extension Service provide a wide range of instructional programs and courses to thousands of our citizens each year. For example, professional schools in the Division of Health Affairs at UNC-Chapel Hill last year through their continuing education programs provided refresher and up-grading courses for 4,965 persons in dentistry, 7,880 in medicine, 2,302 in nursing, 7,227 in pharmacy, and 7,188 in public health.

The University also contributes to economic development and work force preparation through its research and public service activities.

Today basic and applied research is conducted in more than eighty research institutes and centers located at N.C. State University and UNC-Chapel Hill and in ten other constituent institutions. Eight of these research units are interinstitutional organizations involving two or more institutions.

During the last fiscal year, research funded in The University totaled $286 million in such important fields as agriculture, biotechnology, biomedicine, energy, materials science, microelectronics, marine science, aerospace, and signal communications. This research promotes the generation of new knowledge and increasing attention is being given to its application. Recently, for example, the two research universities joined with Duke University to establish the Triangle Universities Licensing Consortium. The purpose of the consortium is to market and license to industry the inventions developed through the universities' research programs.

The economic benefits of research can be enormous. For example, North Carolina State University has participated in a major effort of southeastern states to improve the genetic qualities of loblolly pine nursery stock. About $50 million has been invested in this regional program. The increased economic return on forests already planted is expected to exceed $1.5 billion in the region and $225 million in North Carolina.

Technology transfer is a significant component of The University's contribution to economic development. The Agricultural Extension Service has long been one of the best models for technology transfer in the nation. A less widely known activity, the Industrial Extension Service, last year provided contracted services to thirty-one North Carolina industrial firms in the areas of applied research and improved industrial processes. Through the Industrial Revitalization Forum, the Industrial Extension Service also works with sixty North Carolina industrial firms to implement modern industrial and management services.

The Small Business and Technology Center, now actively involving thirteen of the UNC institutions, assists in the startup of new businesses and in facilitating the transfer of new technology from the research laboratory to the marketplace. During the past fiscal year, the Center provided consultation to over 4,000 business clients. The Center for Applied

Technology at East Carolina University and the new Applied Research Facility being constructed at The University of North Carolina at Charlotte are also intended to facilitate applied research and technology transfer.

Several UNC institutions provide strong regional economic development programs. Examples are: the Regional Development Institute at East Carolina University and the Center for Improving Mountain Living at Western Carolina University. Typically, such centers address regional needs by providing information, research, training, surveys, feasibility studies, and other assistance to businesses, governmental agencies, non-profit organizations, community groups, and individuals.

Several of the constituent institutions have established close working relationships with industry, often through the establishment of industry-university cooperative research institutes and centers. These efforts expedite the application of new technologies and improve the instructional process by bringing faculty in contact with the latest developments and problems in industry.

In addition to research and public service done under university auspices through special institutes and centers, individual faculty members provide consulting services to business, industry, and governmental organizations. Although faculty consulting covers the whole range of University expertise, much of the activity is concentrated in the fields of engineering and management, both of which are vital to economic development.

The University is deeply and effectively involved in the economic life of the State. As centers of research and development and repositories of knowledge, universities attract and in turn facilitate economic development. Education and training programs create a work force with the refined technical, analytic, and communication skills that strong programs in higher education can provide.

The University seeks to develop in its students the capacity for interesting, meaningful, and constructive lives. An education that broadens cultural horizons and social awareness yields intangible benefits for society, and it also helps to lay a solid foundation for individual success in our modern economy. Hence, questions of employment, career, and of the economy are subsumed within a context of broader educational values. It is within that broader context that the joint efforts of the three boards effectively contribute to the increasingly competitive, knowledge-based, and technological economy in which North Carolina now finds itself.

NORTH CAROLINA STATE BOARD OF COMMUNITY COLLEGES
TRANSFERABILITY

Generally, discussions of articulation and transfer have treated these issues as problems to be solved. They focus on fine tuning our existing programs so that students will be treated more fairly, unnecessary duplication reduced, and the transition from one system to another made more smoothly. With these modest goals and the detailed programmatic effort needed to achieve them, it is reasonable to question whether such issues are worthy of attention from the three state governing boards, or are matters which should be delegated to staff for their routine attention.

There is another view, however, which treats articulation and transfer not as problems to be solved, but as powerful opportunities to be seized -- opportunities to make substantial progress in the overall educational attainment of North Carolina's citizens. Viewed in this way, articulation and transfer become matters of fundamental concern to all three state governing boards.

By almost any measure, North Carolina remains, despite all of our efforts, an educational underachiever. We rank 48th in the nation in the percent (54.8) of our adult population with a high school diploma. We rank 44th in the percent (13.2) who have completed four or more years of college. We have the dubious honor of ranking 5th in the percent (18.0) with less than eight years of formal education, and 10th in the percent (5.9) with less than five years of formal schooling. This situation, and how to change it, should command the central attention of the three state boards, especially when meeting together. And addressing this problem is the primary purpose of cooperative efforts among our systems.

Articulation and transfer can make a significant impact on the educational achievement of North Carolinians. Recognition of this fact has already led the various state boards to take important actions. The adoption of minimum admission requirements by the Board of Governors was intended to alter the course-taking behavior of high school students so that more would

be prepared to pursue postsecondary education. The current review of adult high school programs by the joint articulation committee of the State Board of Community Colleges and State Board of Education should also improve our state's position, as will the expansion of jointly offered family literacy programs throughout the state. But more can be done.

Tech Prep

One of the most promising developments in recent years is the new tech prep initiative. Under this effort, large segments of high school (and junior high) students with unfocused, general courses of study are persuaded to focus their studies and raise their aspirations by taking higher level core academic courses and focused electives to prepare them for advanced technical studies in either two- or four-year colleges. Our best model of this program, in Richmond County, has already shown dramatic results. Enrollment in key, gate-keeping courses, such as algebra, has doubled among high school students, with no decline in performance on end-of-course tests. With larger numbers of students declaring postsecondary education as their objective, and with better preparation, the college-going rate in Richmond County is experiencing a steep rise. This, in turn, benefits both Richmond Community College and the regional universities by providing a larger supply of well-prepared college students.

With leadership from the state boards, this program should be expanded throughout North Carolina. And it will take state leadership, since tech prep is no mere fine tuning of our existing approaches, but a whole new thrust in the high school curriculum. Interest is already growing. The Center for Tech Prep Leadership in Richmond County has more than 25 school systems requesting assistance to create tech prep programs. The State Board of Education and State Board of Community Colleges should support their efforts with increased funding. Further, the State Board of Education should assign a high priority to expansion of tech prep and create appropriate incentives for school systems which successfully adopt it. Finally, the State Board of Community Colleges and the UNC Board of Governors should give

strong encouragement for tech prep students to continue their studies by providing financial aid and recognition to successful graduates as "Technical Scholars." The North Carolina Community Colleges Foundation has adopted such a program as a priority, and there is reason to believe many industries will contribute to the effort, especially if the General Assembly provides matching funds as a challenge.

Transfer

In North Carolina, college parallel and transfer programs in the community colleges have historically been modest in size. As recently as 1980, only 22 of the colleges in the system offered college parallel programs to some 13,301 regular credit students. In that year, just over 3,100 students transferred from community colleges to senior institutions. Since that time, the program has seen significant growth. Currently, 34 community colleges offer college parallel programs to over 20,000 students, with nearly 4,000 transferring annually.

Yet, the program remains relatively modest in the context of the system's larger programs. Experience in other states strongly suggests that the college parallel program has the potential for a much greater impact by providing access to many more non-traditional students--those which are older, place-bound, and less prosperous--to higher education. To do this, however, both the perception and the process of transfer must be changed.

Our state has a rich tradition of diversity in higher education, and one which it jealously guards. In the area of transfer, this diversity creates a bewildering array of requirements, course titles and codes, seemingly arbitrary decisions on credit transfer, and difficulty in monitoring the effectiveness of programs. Other states have "solved" their transfer problems with "simple" solutions such as common course catalogs and mandatory acceptance of transfer credit. But this approach undermines the diversity we wish to preserve.

There are proven ways, however, to achieve effective transfer relationships without discarding the flexibility and diversity of either the sending or receiving colleges. While not without some cost, these methods carry a small price for achieving better transfer and greater achievement for more citizens in higher education, while preserving diversity and academic discretion to the individual colleges.

Appalachian State University first established an office of transfer students in this state, and to great effect. Such an office, preferably positioned in academic affairs, provides an internal advocate for transfer in the university. The office is responsible for reviewing transcripts of transfer students, maintaining liaison with sending institutions, providing assistance to academic departments which are unfamiliar with the ins and outs of transfer, providing support to transfer students as they adjust to a new environment, and giving feedback to sending institutions (community colleges) on the performance of their former students.

An office of transfer students should be funded and established by the UNC Board of Governors in most, if not all, of the constituent institutions. As college parallel programs continue to expand the State Board of Community Colleges must assure the consistent quality of each program. Detailed feedback from the senior institutions will assist in this effort. Both governing boards should direct their staffs to create new opportunities for faculty and staff from the systems to meet regularly to improve the effectiveness of transfer.

The State Board of Education should direct staff to take action to assure that the college parallel option is well understood and supported in school systems, especially for students who might otherwise forego college. And the overall transfer program should be accountable to its primary purpose: expanding opportunity for North Carolinians to achieve a baccalaureate degree.

Finally, the three governing boards should make every effort to keep the primary purpose of their cooperative efforts before them. In their planning and evaluation for their systems, goals and measures for the overall academic advancement of the state's citizens should be central. Bold, measurable objectives should be stated in their respective plans for the rate of graduation from high school, rate of continuation to postsecondary education, rate of transfer to senior colleges, and achievement of ultimate objectives in performance, degrees, and diversity of students.

These actions and this perspective will breathe new life into the cooperative efforts of our systems. They will capitalize on the proven models, tech prep and transfer, and they will focus our agenda on the goals we share.

NORTH CAROLINA STATE BOARD OF EDUCATION
TRANSFERABILITY

The State Board of Education is committed to working closely with the Board of Governors and the Board of Community Colleges to create improved capabilities for students to move across the different levels of education. The Board is aware of several issues which should be addressed in order for this coordination to occur, and a number of these matters are discussed in this paper.

The State Board of Education is particularly concerned about the transferability issue as it relates to the remedial courses which are currently being taught in the University System. The Board is not satisfied with a situation in which large numbers of our high school graduates need to have remediation during their first year of college in order to be successful.

The Board has taken two major steps to address this problem. The first is the development of the Basic Education Program and the accompanying Standard Course of Study. The Standard Course of Study and the basic curriculum specify clearly, and in detail, the course content for the North Carolina public schools and the kinds of knowledge and skills which are expected to be learned in the various courses. Having these requirements clearly laid out help ensure that there is consistency across the State and that the important components of various courses are covered.

A second effort of the Board is the development of tests to be given at the end of courses such as Algebra, Geometry, Chemistry and comprehensive tests to be given at the end of various grades. These tests were developed in North Carolina to match our curriculum. The tests are quite rigorous and there are very few students who will not find them to be challenging. This testing program provides the Board with excellent data regarding the quality of many of our high school courses. In addition, this information should be enormously useful to those in higher education who are admitting students and evaluating the students' capabilities for college work.

Another issue of concern related to transferability is making sure that all students are aware of college requirements and are given adequate guidance so that they can be prepared for college if that is their goal. Unfortunately, there are many students in North Carolina whose parents cannot or will not act as advocates, or as counselors for them, and who provide them with little guidance regarding what it takes to gain admission to college. Therefore, the Board is very aware that the public schools need a strong counseling program and good school/home relationships so that parents can be kept informed regarding students' career goals and the degree to which their course preparation is preparing them for their career goals. Through the Basic Education Program, as approved by the Board, the numbers of counselors in the State will increase. Because of this effort, it is likely that students will be more aware of what is needed to prepare for college.

It has been suggested that the Board can help ensure that high school students are successful in college by specifying more of the twenty courses required for graduation. Presently, the Board only specifies eleven of the twenty courses required for a high school diploma. It may be necessary for the Board to consider requiring more courses, such as biology or additional science courses, and providing fewer electives, to ensure that students are better prepared in the basic areas needed for college work. The Board will be discussing this issue in the near future.

The State Board of Education is also interested in many innovative programs across the State which relate to transferability and coordination between high school and higher education. For example, the "Tech Prep" Program in Richmond County, which has received considerable attention, is held in high regard by the Board. While this is not a perfect program, it certainly seems to challenge students and seems to put students on a clear career or college path, avoiding the problem of having students drift through high school with very little planning in terms of career or college. By supporting programs such as "Tech Prep", and through participation on joint committees with community colleges and higher education, it is the intention of the Board to strengthen the linkages among the three boards responsible for education policy in North Carolina.

Finally, there are several specific issues related to public school and higher education linkages which the Board believes need particular attention:

A. Issues related to high school students taking post-secondary courses:

1. Currently, four-year college tuition bills for high school students must often be paid either by students themselves or the local public school system; the post-secondary institution does not routinely waive tuition. Some students are unable to pay for courses, and some local school systems have difficulty paying tuition. This situation creates inequity since some students are unable to benefit from these cooperative programs. This issue is complicated by the way in which funds are allocated based on full-time equivalent (FTE) students. This matter needs to be addressed by the three boards working together.

2. The coordination of schedules is also a problem, especially for students enrolling in vocational programs offered at community and technical colleges. The semester or quarters at post-secondary institutions do not correspond to the year-long courses offered in high schools. Furthermore, the rigidity of the vocational programs, with required sequential courses, does not encourage high school students to pursue courses in post-secondary institutions.

3. Although the Huskins Bill has created the opportunity for post-secondary institutions to offer college courses to high school students, the nonequivalency of college credit hours and high school units is an issue. For example, a three-hour semester course in college equates to only one-fourth of a high school unit. Thus, a student could complete a college-level science course and technically receive only a quarter of a unit of credit for high school science.

4. The issue of comparability needs to be discussed as it relates to students who receive high school diplomas from community colleges versus high schools. For example, public school personnel must be certified; community college personnel are not required to be certified, even though their courses may also lead to high school graduation.

B. Students are very concerned about gaining admission to their first-choice institution of higher education. The admission criteria used by higher education can have a profound influence on students' choices of high school courses and curriculum. Admission policies should encourage students to enroll in advanced high school courses that will prepare them for college work. However, in some cases, students choose not to enroll in advanced courses because of the difficulty level which could have an adverse effect on their grade-point average or high school class rank--factors frequently used for college admission. Differential weighting of advanced courses could alleviate this problem by assuring that students are not unduly penalized for taking difficult high school curriculum.

The State Board of Education will be pleased to work with The Board of Community Colleges and The Board of Governors to address all of these transferability issues.

UNIVERSITY OF NORTH CAROLINA BOARD OF GOVERNORS
TRANSFERABILITY

Education is a continuum in levels of preparation and attainment. Mastery of arithmetic in elementary grades prepares a student for algebra in the secondary grades, and algebra helps to prepare the student for trigonometry and for calculus. The student is then prepared in college to choose a major in engineering or in the sciences. Choices made at one level of education, and performance in seeing through the choices made (overtly expressed in grades and test scores), will substantially determine what choices are practicable at the next levels. The choices are, to be sure, not irrevocable. The student who enrolls as a freshman ill-prepared in mathematics may still be able to study engineering, but completion of the engineering degree will be impossible in eight semesters. The "catch-up" work in mathematics will consume resources and time, and this circumstance will often lead to some other choice. Not all fields of knowledge are so clearly cumulative as mathematics, but the point is still the same. The student ill-prepared in English grammar will pay a price. The content of educational choices and performance in a chosen course of study at each level exert heavy influence on the definition of choices at the next.

The process of choices, preparation, and advancement is basic to the development of sound programs of transferability. Choices and attainments at one level prepare the student for study at the next. High school prepares the student for college, and the college experience should build efficiently on that high school base. The student should go on to the next level in fact as well as in form. Repetition of work already earned is also a waste of time and resources. The same principle applies in college transfer.

This principle shaped the decision of the Board of Governors to establish certain minimum admissions requirements for all of the University -- requirements consisting of subject areas to be taken and passed in high school. The adoption of these requirements is meant to enlarge the pool of

students prepared to go on to college. The requirements are, in effect, interventions in student choices. The purpose is clear. By choosing those subjects included in the requirements, the student will have made choices in high school that broaden the meaningful choices open to the student beyond high school. And at the other end the objective is to stimulate an educational program in the earlier grades that has the student ready for algebra and the other requirements by the ninth grade.

Not every high school graduate will want to go to college, but some further expansion of the college-eligible pool is important to the economic and social progress of North Carolina. Moreover, the evidence is that, for those students not planning to go to college, the same course of study contained in the minimum admissions requirements is increasingly advisable. Mastery of English, of mathematics at least through algebra, and a strong grounding in science should be the foundation of strong vocational preparation as well as college preparation. Such courses would enormously strengthen the vocational programs in preparing graduates to go immediately into the workplace after finishing high school.

College attendance rates have, in fact, significantly improved in recent years for North Carolina high school graduates. As recently as 1978, barely 22 percent of the students graduating from North Carolina high schools in the previous school year enrolled as freshmen in UNC institutions that fall. For the last four years, the proportion has ranged from 24 percent to 25 percent. For black high school graduates the proportion still is lower, but the gain has been even more -- going from 16 percent to almost 22 percent in the same period of years. For American Indian students the gain has been from 15 to 26 percent.

An almost equal proportion of these high school graduates enroll in college or other post-secondary programs in the community and technical colleges. A significant number of these students will want to transfer into baccalaureate programs. Sometimes this decision to transfer will be made immediately upon completion of the community college program, and for others the decision will come at a later time. The exact size of this potential

college transfer pool from the community colleges cannot be determined, but it is apparent that there is a substantial flow of transfer students from community college institutions into UNC institutions, and the numbers are increasing.

The number of transfer students from community college institutions who entered UNC institutions' regular session, on-campus programs was 2,169 in the fall of 1984. The number has steadily increased to 2,868 in the fall of 1989, a growth of 32 percent. The students came from all 58 community college system institutions. The number of applicants has similarly increased over this same period of time, and the proportion of applicants who are accepted has consistently been about 85 percent. Thus, most students who decide to transfer have the opportunity to do so, and the academic performance of these students after transfer gives further indications that sound practices are being followed.

A common task before all three boards is to expand the volume of student movement up through the various levels of education and thus to broaden educational opportunity in North Carolina. At one level the Board of Governors has sought to address this need with its policy on admissions. The larger, more important, and far more complex task is to reduce the number of school drop-outs. The Board of Governors and the State Board of Community Colleges should be prepared to assist the State Board of Education in whatever ways they can in this fundamentally important effort.

At the college transfer level there are many approaches to increasing the student flow. In some instances the student movement is provided for in specific articulation agreements for particular degree programs. Contractual agreements through which UNC institutions offer the transfer curriculum at a community college campus are also in effect in a number of instances. In nursing, UNC schools are actively recruiting associate degree students in the community colleges. The most comprehensive oversight of the transfer issue has for more than thirty years been in the work of the Joint Committee on the College Transfer Student, which represents the community colleges, the private colleges and universities, and UNC.

A model approach in many respects is the work this Committee has done in recent years with the three UNC schools of engineering in the development and publication of the standards and requirements for transfer into each of the three. This engineering transfer program has given clear direction to those community college system students who want to prepare themselves for transfer, while spelling out clearly the differences between engineering and engineering technology and the confusion that had sometimes in the past surrounded the two. The University is now taking this kind of initiative to facilitate the transfer of ADN students into BSN programs.

The State of California has given careful attention to this transfer issue, and in a recent educational Master Plan it has stated the sound principle that is involved:

> Those who enroll in a community college (the Plan says) must know that if they prepare themselves by successfully completing the transfer curriculum they can progress to the upper-division levels in a four year university and, where capacity permits, at the public campus of their choice.

It is important, as the statement points out, that we recognize that not all curricula are necessarily transfer curricula, and students need to know this. They also need to understand that there may be a difference between the requirements for a particular occupational license and certificate and for the first two years of study toward the baccalaureate degree. For example, the former is not likely to require study of a foreign language, but the latter may well do so. University institutions, for their part, need to work at promoting transfer arrangements that are clear and that can assure to the student, state-wide, an opportunity to receive appropriate credit toward the baccalaureate degree.

The boards have no greater responsibility than to work to promote access to educational opportunity for all North Carolinians. In the final analysis that access must continue to depend on constitutional and historic policies of low tuition and on the availability of programs of student financial aid. The low tuition principle has kept tuition at University and community college institutions at among the lowest in the nation. Even so, forty-six percent of the students in University institutions in 1988-89 received some financial aid, and at some campuses the proportion is much higher than this. Board policies to facilitate transfer will be meaningless if the financial barriers to access are not controlled.

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